

INFORMATION SHARING AMONG FISHERIES AND AQUACULTURE INSTITUTIONS FOR SUSTAINABLE DEVELOPMENT IN MALAWI

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ABSTRACT: it is an undisputed fact that no single library or an information center has all the information required by its users. The reasons range from inadequate financial resources to inadequate space to keep the information. That is why there are efforts to share information among libraries or information centers. The sharing can be at an individual level or in a network within a country or beyond. Fisheries and aquaculture libraries or information centers in Malawi are no exception. They share information among themselves.

This paper outlines first what libraries and information centers in Malawi are doing to ensure that they are able to share fisheries and aquaculture information among themselves and discusses the problems they encounter in such an effort. Finally the paper suggests some solutions to the problems so that they (libraries and information centres) can best share information resources.

KEYWORDS: Electronic information, Accessions Lists, Inter-lending, Computer database, Digitization, AGORA, HINARI, Aquaculture and Fisheries Sciences

Introduction

Malawi has not more than ten libraries and information centers who are involved in aquaculture and fisheries information. Some of the notable libraries and information centers are: Bunda College of Agriculture (BCA), Chancellor College (Chancoll), National Aquaculture Centre Library and Information Centre (NAC-LIC), Natural Resources College (NRC), Monkey Bay Fisheries Research Centre, Mzuzu University (Mzuni) and Malawi Fisheries College (MFC). These libraries and information centers have a major role of providing the required information used for teaching, learning and research. But, it is impossible for a single library or information centre to satisfy the information needs of its users alone. That is why they have been cooperating among

themselves by sharing information resources. However, their efforts are met with a number of challenges.

The Role of Aquaculture and Fisheries Sciences to National Development in Malawi.

Fish provide 28 percent of the total animal protein intake in Malawi. It is also a source of vital vitamins, micronutrients and minerals. As a land locked country with about 20% of its total area 118,485 square kilometers covered in water, Malawi practices inland fishing. Most of the fish is consumed locally, marketed domestically and consequently contributes to the subsistence and livelihood of poor people.

However, for the past twenty years, the country is failing to satisfy fish demands by its population. It has been observed by experts that the per capita consumption of fish has declined by 50 percent from 14kgs per year to just 7kgs per year. The reduction in per capita fish consumption has seriously affected the nutritional security of rural Malawians who are already facing food insecurity due to declining land productivity (Jamu and Chimatiro 2005). These problems are compounded by the limited supply of fish and prohibitively high prices brought about by transportation problems. Difficult preservation methods add to the problem of transporting to a large population that live far away from Lake Malawi, which is the main source of fish.

There is also a problem of environmental threats to many inland water bodies caused by increasing aquatic pollution, habitat degradation, water use and other man made pressures. All these problems need a better understanding of the aquatic systems and prevent environmental impacts affecting fisheries resources and aquatic biodiversity. At the same time there is a need to expand aquaculture and sustain capture fisheries, in order to meet the high demand for fish (FAO, 2003).

Therefore, libraries and information centers in Malawi have a crucial role of providing information for the effective aquaculture and fisheries management in terms of teaching, learning, decision-making, conducting research and outreach, etc (see Table 1. below).

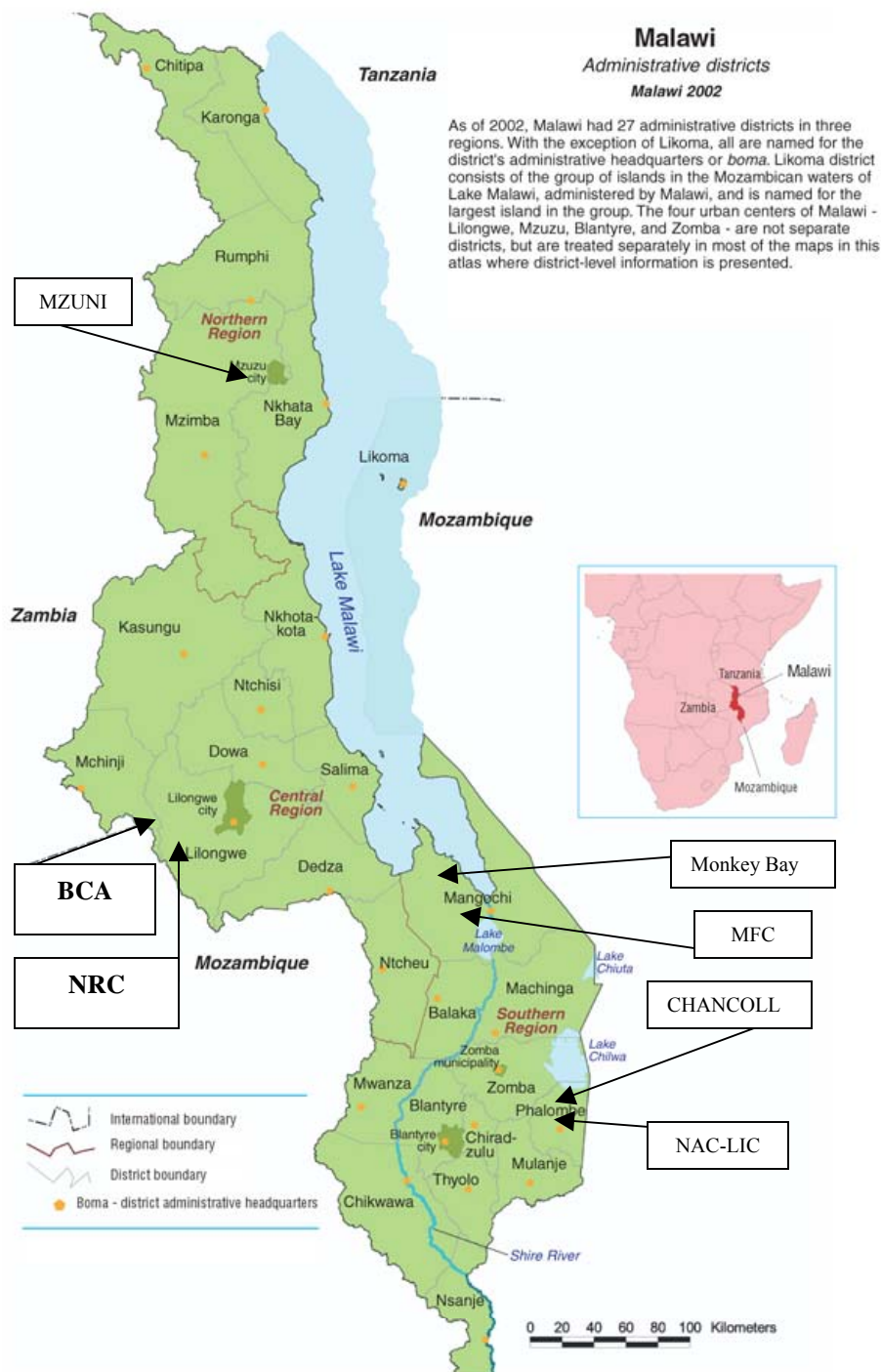
Table 1. Aquatic and fisheries Information need (Salanje 2003).

	Information Users	Information Needs
1	Fishermen	Markets for their fish landings, daily weather forecasts, types of fish species, modern fishing methods, sites for fish shoal
2	Fish farmers	Modern fish farming methods, markets for the fish, fish feeds
3	Tourism industrialists	How to attract visitors to the holiday resorts
4	Water transporters	Daily weather forecasts, modern water transport equipment
5	Researchers	Past research activities, on-going research projects, prospects for research funding,
6	Educators and Students	Teaching, learning and research materials to impart knowledge and skills for the students to pass exams
7	Economists	Contribution of fishing industry, water transport and tourism industry to the national economy
8.	Extension workers	Modern fish farming methods

Efforts in Information Sharing

Libraries and information centers involved in aquaculture and fisheries sciences in Malawi have over the years been cooperating by sending each other accessions lists, inter-lending services, distribution of duplicates and papers presented by scientists and inviting one another to workshops/ seminars/ meetings. These efforts have not worked effectively because of a number of reasons such as:

- A few institutions produce and send accessions lists which may not be current
- Unreliable and slow postage services
- Inadequate resources for sharing
- Scientists not depositing their papers to libraries and information centers
- Infrequency of workshops/ seminars/ meetings
- Lack of and untrained staff



Current Efforts for Sharing Information

Accessing Electronic Information through a Library Consortium.

The Malawi Library and Information Consortium (MALICO), which was formed in 2003, has made a tremendous improvement in the area of accessing and sharing of information. MALICO has within the two years of its existence:

Brought into the country four V-SATs with funding from Open Society Initiative for Southern Africa (OSISA) among other donors. These V-SATs were installed in February 2005. Three of the four V-SATs are at Bunda College of Agriculture, Chancellor College and Mzuzu University. The coming of the V-SATs has increased the bandwidth to ranges from 128kbs - 256kbs uplink and 256kbs - 516kbs downlink. This translates to an increased access of electronic information by users. Those libraries and information centers without a V-SAT connection, request the V-SATs sites to assist in downloading large amounts of information for them. However, it is the intention of MALICO to have all its member institutions to be connected to the V-SATs through either a radio link or any other technology.

Table 2. Statistics on use of PERI Resources in Malawi January-June 2005

	January	February	March	April	May	June	TOTAL
Users	120	212	311	469	399	941	2452
Searches	228	336	906	1641	1206	2413	6730
Table of Contents	24	434	156	145	140	111	1010
Abstracts	118	431	816	820	447	1000	3632
Articles	176	811	1373	1212	623	1293	5488

Source: <http://www.inasp.info/scgi-bin/peri/admin/>

From Table 2 it can be seen that there has been a steady increase in the access of electronic information through PERI since the V-SATs were installed in late February 2005.

Subscribes to electronic journals through PERI and eiFL programs. Some of the electronic resources, which MALICO subscribes to for its members, are EbscoHost, Emerald, Oxford University Press E-Journals, African Journal Online and Springer. Conducted training on how to access electronic information.

Training

Despite the distances separating the institutions, staff in these libraries and information centers come together once in a while in workshops, meetings or seminars. In such forums participants share ideas, knowledge and skills in their professions. Workshops

and seminars do take place but they are not regular and more often do not involve all aquaculture and fisheries sciences institutions.

A workshop, which involved almost all institutions, was held at BCA Library in July 2004 with funding from IAMSILIC. At this workshop participants learnt skills for searching electronic information using:

- AGORA (Access to Global Research in Agriculture)
- EbscoHost
- TEEAL (The Essential Electronic Agriculture Library) database
- ABAFR (Aquatic Biology, Aquaculture Fisheries Resources) database,
- BCA Library Online Public Access Catalogue,
- BCA Aquaculture bibliographical database.
- Participants to this workshop came from NAC-LIC, BCA Department of Aquaculture and Fisheries Sciences, Monkey Bay Fisheries Research Unit, Malawi College of Fisheries, Natural Resources College and BCA Library.

Other workshops, which had participants from aquaculture and fisheries sciences libraries and information centers during the past one-year or so, were:

CTA workshop to establish a QAS (Question and Answer Service) national coordinating centre, which was held at BCA in May 2004. At this workshop participants from Mzuni, NAC-LIC, NRC, and the host BCA also attended. BCA Library is the national coordinating center of QAS and has responded to over 200 requests since May 2004. Requests mostly come from farmers, extension workers, scientists, policy makers, librarians, researchers, students, lecturers/teachers, and planners. These include those involved in aquaculture and fisheries sciences.

In July 2005 there was a Training Workshop on how to access to electronic information on AGORA and HINARI resources. Participation was from NAC, BCA, Chancoll and Mzuni among others. It was realized during this workshop that about fourteen institutions have registered and are using AGORA and a similar number of institutions are HINARI users.

The following are the institutions registered for AGORA in Malawi in September 2005:

- Agricultural Research and Extension Trust
- Bunda College of Agriculture
- Chancellor College
- Chitedze Research Station
- Economics Department of Chancellor College
- -University of Malawi
- Kamuzu College of Nursing
- Malawi Bureau of Standards
- Malawi National Aquaculture Centre
- Malawi Social Action Fund (MASAF)

- Ministry of Health Lilongwe
- Mzuzu University
- National AIDS Commission
- Tea Research Foundation of Central Africa
- University of Malawi, College of Medicine

These institutions are yet to come up with reliable statistics on the number of users and articles, abstracts or table of contents downloaded in the past year. However, AGORA has definitely made an impact in the quality of research, teach and learning at BCA from the observations made of users using /assisted in using this information resource.

FAO's Project on the Elaboration of Mechanisms for the Sharing of Information Resources and the Supply of Inland Fisheries and Aquaculture Information and Documentation

In June 2004 Bunda College of Agriculture (BCA) entered into an agreement to carry out a project on the elaboration of mechanisms for the sharing of information resources and the supply of inland fisheries and aquaculture information and documentation. The project's specific activities are:

- Provide an overview of the information used in support of fisheries and aquaculture management in Malawi;
- Provide details of the current publications on fisheries and aquaculture produced in Malawi and their methods of dissemination;
- Provide an overview of the Bunda Library collection of local fisheries publications and related databases and propose methods for improved dissemination;
- Coordinate dissemination of national fisheries publications to ensure coverage in international databases such as ASFA and ABAFR;
- Promote networking activities and evaluate the role of a network focal point for the FAO/SAIAB network of fisheries libraries in Africa;
- Carry out awareness raising, guidance and advice to national institutions on access to newly available information resources such as AGORA, information related to the FAO Code of Conduct for Responsible Fisheries and on library network activities;
- Contribute to the study on digitization of fisheries publications in collaboration with FAO and the International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC) in compliance with Open Archive and other international standards;
- Prepare an annual report and other focal point activities, including a statistical analysis of information requests and services provided.

The project so far has registered some successes and challenges. Some of the successes are:

- Two more libraries (NAC-LIC and Chitedze Agricultural Research Station) have registered and are using AGORA;
- Distributed to all aquaculture and fisheries sciences libraries a printed copy of BCA Library's Aquaculture database; and FAO CD-ROM containing Code of Conduct for Responsible Fisheries documents;
- Installed ASFA software in some computers at BCA. Plans are underway to conduct training for staff from all the aquaculture and fisheries sciences libraries on how to enter records and search for information on the software before installing the software in their respective libraries;
- BCA Library is using the ASFA Thesaurus for its Aquaculture database
- Collected some scientific papers from Aquaculture and Fisheries sciences institutions;

The project has met a few challenges. There was a change of staffing at BCA during the past one year where two of three experienced and qualified staff moved to other University of Malawi College libraries. Two new staff has since replaced them and is working with the remaining staff. Added to this situation at BCA is the fact that over half of the other libraries have no permanent and trained staff. A request has been made to FAO to extend the project to one more year so that the remaining activities could be accomplished.

Digitize Local Information

It is unfortunate that there is not much electronic information on Malawi let alone on aquaculture and fisheries sciences information. There are efforts to digitize the information starting with Malawiana (materials on Malawi or by Malawians) so that it can be accessible electronically. University of Malawi Libraries, through the Central Library Services Unit has already acquired a server and other equipment to embark on a digitization project. What is delaying the project to start off is lack of expertise. BCA is also looking at ways on how it could digitize aquaculture and fisheries science information with a FAO project mentioned above. It was supposed to be a pilot project on digitization of the local information. Unfortunately, the computer, which was used to install Greenstone software, crashed before much was done. Another computer is yet to be identified.

Strengthening a National Focal Point

It has been argued by Kadzamira, Ngwira and Salanje (2004) the need to establish a national focal point 'in order to ensure maximum exposure of locally published work and to coordinate the sharing of information resources'. At the same time a national focal point could become a repository for all aquaculture and fisheries publications in the country. BCA Library has more information resources and capacity than the other libraries and information centers; it could therefore become a national focal point. In such a situation, aquaculture and fisheries sciences institutions would be mandated to deposit their publications with BCA library as a mechanism for preservation such that if one copy goes missing in one institution, at least one other copy will be available in the repository.

After all BCA is already a national coordinating centre for the Question and Answer Service, a programme for CTA (Technical Centre for Agricultural and Rural Cooperation).

Conclusion

Aquaculture and fisheries information libraries in Malawi have the potential and opportunities of sharing information /documents among themselves and with other institutions within or outside the country. However, they have to resolve some of the challenges they face in their efforts to share information and documents. BCA is taking the lead to ensure that these institutions are able to work together in an effort to realize their goal.

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